



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/620,469	07/20/2000	Du-seop Yoon	1293.1132/MDS	3077

21171 7590 03/18/2004

STAAS & HALSEY LLP  
SUITE 700  
1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER

ANGEBRANDT, MARTIN J

ART UNIT	PAPER NUMBER
----------	--------------

1756

DATE MAILED: 03/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/620,469

Applicant(s)

YOON ET AL.

Examiner

Martin J Angebrannt

Art Unit

1756

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 27 February 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_

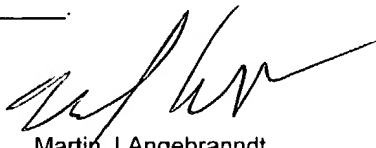
3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: none.Claim(s) objected to: 8.Claim(s) rejected: 1-3, 5, 6, 9-11 and 13-21.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.
10. ☐ Other: \_\_\_\_\_

  
Martin J Angebrannt  
Primary Examiner  
Art Unit: 1756

Continuation of 5. does NOT place the application in condition for allowance because: It is clear from the references and the varying composition that the references function record in the first layer alone, the first and second layer or all three. This is illustrated in the figures as well. The examiner also points to the use of SbTeGe recording layer, similar to those used in the instant application. Clearly, the readout does not cause the layers to erase, but the more intense writing light can cause the changes. This may not have been fully emphasized as the examiner would assume one of ordinary skill in the art would recognize the inadequacies of optical storage media which erased upon replay/readout. The applicant appears to be missing a point of semantics. When the writing beam of a sufficient intensity is incident upon the recording layer, it change its state or phase. The irradiated area corresponding to the data point or spot will have a different refractive index than the surrounding, unirradiated areas, but the same thickness as before. Reading light (which has a lower power than the writing light) incident upon the recording layer will change undergo a phase shift (a phase change in the light due to the difference in the optical thickness, which is the product of the refractive index and the physical thickness), but the phase of the recording layer stays the same. The readout process detects this phase difference in the path of the light between the written and unwritten areas and thereby senses the data or written spot. In the case where two recording layers are present and read/written from the same side, light passing through written areas of the first recording layer will undergo a slight focussing due to the difference in the refractive index of the written portion and therefore the beam incident upon the second recording layer will be smaller. This is why a super-resolution layer is aptly named. The phase change in the super-resolution layer (see Ichihara et al.) causing the focussing effectively increases the resolution of the beam (decreases its size) by changing the effective refractive index describing the diffraction limit of the light incident upon it. (generally this is assumed to be 1 (the refractive index of air), but neglects the effects of other higher refractive index layers (optically dense) in the beam path. The effect is inherent, but a close reading of Ichihara et al. should render this clear, noting that the super-resolution layers of Ichihara et al. are phase change layers and so do change phase when the recording layer is written upon. There is the additional issue of what happens to the light passing through the edges of the written spot as the writing process does leave artifacts. Additionally, as the claims are directed to the media and not the process of use, and the compositions of the recording media of the prior art and the instant application are similar, the applicant has a significant burden of showing a difference in their mode of functioning

